**EO 208-Ethanol and Bio Fuels Production**

**Lake Area Tech (Spring 2010)**

**Instructor:** Scott Leitheiser

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**Duration: 4.0 credits**

**Course Description: The objective of this course is to explain the principles and basic concepts involved with the bio fuels industry. Topics to be covered are ethanol, biodiesel, and cellulosic based fuels. Histories, production procedures, economics, politics, trends, advantages, and disadvantages of each topic will be discussed.**

**Class Format:**

**The method of delivery for Bio Fuels will be hybrid by nature. What this means is that the course will be taught with varied educational vehicles to include: lecture notes, small group activities, blogs, labs, presentations, quizzes, and tests.**

**Text book: There will be no specific reference text for this class. Instead there will be a class wiki where all reference documents, power points, videos, assignments, and rubrics will be organized**

**Materials Needed: 3-ring binder, OSHA approved safety glasses, calculator, and notebook.**

**Objectives:**

**208-1 The student will identify the process of converting grain to ethanol.**

**208-2 The student will learn and develop a vocabulary base for each of the systems of study.**

**208-3 The student will learn basic chemistry concepts need within the above mentioned processes.**

**208-4 The student will identify the variety of biomass/cellulose sources for ethanol production.**

**208-5 The student will identify the energy relationships between science, society, and agriculture.**

**208-6 The student will determine benefits and concerns of using biomass fuels as motor fuels.**

**208-7 The student will develop skills in problem solving and personal decision making**

**Assessments:**

* + **The student will be held responsible to organize his/her 3-ring binder. This will be handed in at the end of the course for a grade. It must include all loose leaf materials used during the course, as well as, completed labs, papers, and assignments.**
  + **Laboratory experiments will be graded on an individual basis. Grade will include set up of the lab and corresponding paperwork, your observed participation, and completion of all questions posed in the lab.**
  + **Quizzes will be given throughout this course.**
  + **A course project will be constructed during the course and will be a capstone to the semester.**
  + **A final assessment will be given at the end of the course.**

**Attendance:**

In accordance with Lake Area Tech’s academic standards and the standards of your future employers, class participation and attendance is essential. Hands-on and lab experiences will not be able to be made up. If you must be gone, please email and/or call me.

**Academic Integrity:**

Cheating and plagiarism will not be tolerated. You cannot present the work of others as your own, whether it is on an exam or in a written assignment. The consequences of academic dishonesty include disciplinary probation to expulsion. In addition, you will likely receive a failing grade for the exam/assignment and possibly the course.

**ADA Statement:**

Students are entitled to ‘reasonable ‘accommodations’ under the provisions of the Americans with Disabilities Act. Those in need of such an accommodation should notify the instructor and make an appointment with the ADA compliance officer.

**Grading Scale:**

Final grades will utilize the following scale:

94%-100% = A

87%-93% = B

80%-86% = C

79% or less = Not passing

Grades are determined by your performance on quizzes, Blogs, Group Presentations, exam, and your final project. There may be other grades throughout the duration of the class as well. You will be able access your grades through elearning. There is NO Extra Credit.

**Other Technology:**

During class, cell phones, blackberries, ipods and other MP3 players must be turned off and put away unless you have discussed special circumstances with your instructor.

**Personal Responsibility:**

Please take responsibility for your learning. You earn your grades I do not give them to you. Make sure you that you seek help if you have questions. I want to help you be successful academically as you progress toward your desired career.

**Important Sites:**

http://eo-208-ethanol-and-bio-fuel-production.wikispaces.com/

**Note:  EO 204 Distillation and Refining Operations course is offered as part of the Energy Operation program.  All course content is subject to change by the instructor as deemed necessary. You may not record any of my class, its class members, or any content expressed without my permission.**